What Can You Do to Protect Your Drinking Water!

Locate and properly plug unused wells. If you have an unused well or know somebody that does, contact Fred Pratley at (616) 781-3131 or Kristine Boley-Morse at (616) 781-4867 ext. 5 to have it properly plugged.

Follow instructions carefully when using pesticides or fertilizers. Over-application and misuse can cause these products to make their way into both surface water and ground water.

Properly dispose of household hazardous waste. Never dump items such as motor oil, fuel products, cleaners, paints, and pesticides on the ground or down the drain. Dispose these types of products at Hazardous Waste Collection Sites. Call the Calhoun County Environmental Health Department for dates and times at (616) 969-6341.

Properly maintain your septic system. If you have a septic system, make sure that it is pumped periodically (depending on tank and family size). Signs of malfunction include, slow drains and flushing, back-ups, and a saturated drain field.

Check above and underground fuel tanks regularly for leaks. If you have leaking storage tanks, have professionals remove or fix them immediately.

Complete a Home or Farm Environmental Risk Assessment. These assessments are free, confidential, and voluntary. The assessment helps you to identify your risks to ground water contamination and provides ideas on how to reduce those risks.

Home*A*Syst-contact Tara Egnatuk
Farm*A*Syst-contact Kristine Boley-Morse
at (616) 781-4867 ext. 5

City

Of

Marshall

Michigan

Groundwater

Stewardship

Program

CITY OF MARSHALL
DEPARTMENT OF PUBLIC SERVICES

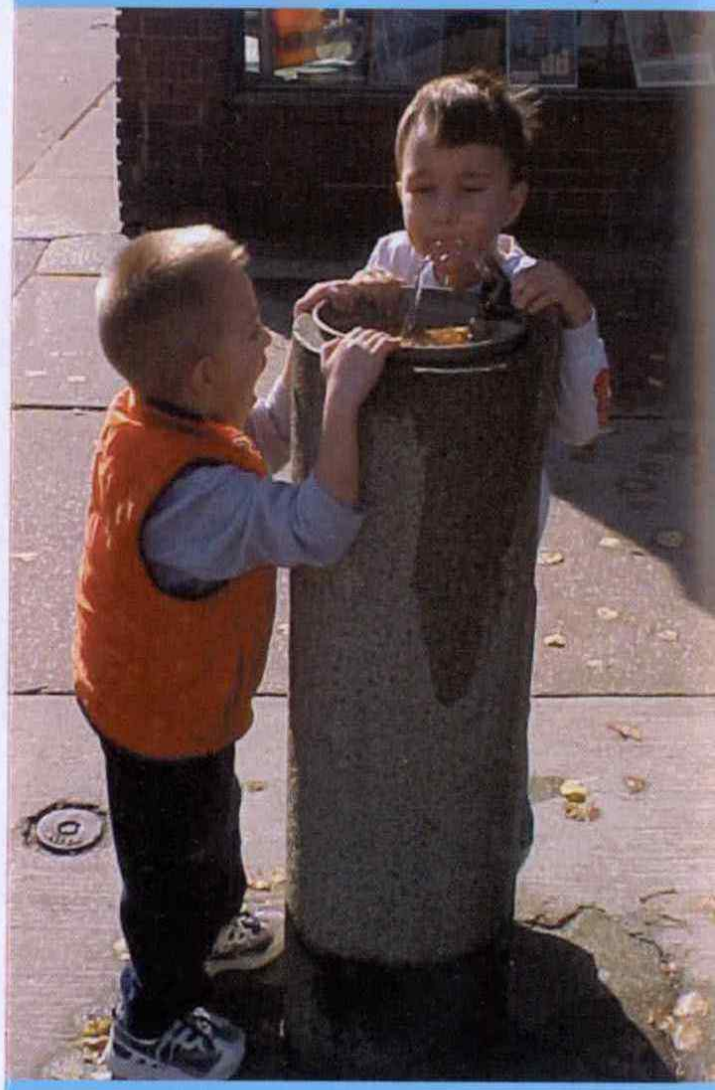
For more information please contact:

City of Marshall
Water Superintendent
Fred Pratley
(616) 781-3131

Michigan Department of Environmental Quality
Drinking Water and Radiological
Protection Division
Jim McEwan
(517) 335-9322

City of Marshall's Wellhead Protection Program

A Plan to Protect the Drinking Water of Marshall.



GROUNDWATER. YOUR DRINKING WATER.

Marshall's Wellhead Protection Plan

The Wellhead Protection Plan (WHPP) is designed to protect Marshall's public water supply from potential sources of contamination.

Where does the City of Marshall's water supply come from?

The City of Marshall uses four, 12" diameter wells drilled 100' to reach ground water from the Marshall sandstone aquifer as the sole drinking water source.

What is ground water?

Ground water is water beneath the surface of the earth that completely fills (saturates) the pore spaces between soil particles, such as sand and gravel. Ground water recharges through the infiltration of rain or snow.

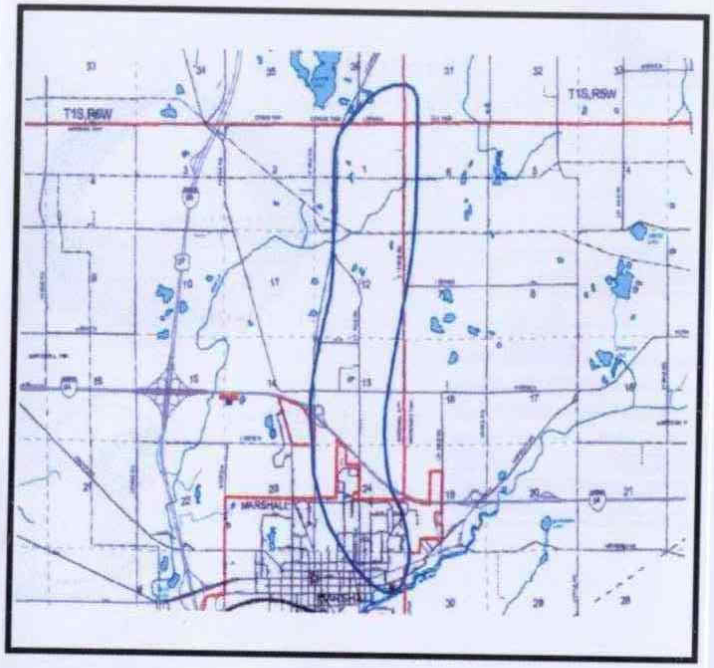
What is an aquifer?

An aquifer is an underground layer of rock, sand, or gravel containing enough ground water to supply a well.

Marshall's Wellhead Protection Plan

The WHPP is the result of dedicated efforts of the community Wellhead Protection Team that consists of citizens with an interest in protecting our water resources. Working with Fishbeck, Thompson, Carr & Huber Inc., the Team prepared the WHPP to provide the community with an active plan for protecting the drinking water supply. The plan meets guidelines established by the Michigan Department of Environmental Quality. The key elements of the plan include the establishment of roles and responsibilities, a contaminant source inventory of the Wellhead Protection Area (WHPA), management strategies to protect our ground water supply, a contingency plan, and a plan of educating the community about the importance of protecting ground water.

Wellhead Protection Area Delineation



This delineation identifies the area that contributes ground water to the public water supply wells. It is based on ground water time-of-travel of 10 years. This 10 year time-of-travel provides a reasonable length of time for responding to a contamination event, if one should occur. Any sources of contamination within this zone of capture could impact the wells.

Possible Sources of Contamination

* Leaking Underground Storage Tanks
* Failing Septic Tank Systems
* Hazardous Chemical Spills
* Transportation Accidents
* Misuse of Pesticides and Fertilizers
* Road Salt Application Areas
* Poorly Managed Livestock Waste
* Urban Run-off
* Improperly Plugged Unused Wells

Unused Wells. A Serious Risk to Ground Water Contamination

An important component of the WHPP is identifying, locating and properly plugging unused wells.

What is an Unused Well?

1) Wells that have their use permanently discontinued, where a replacement well has been drilled, or the home has been connected to city water.
2) Wells that are in such disrepair that their continued use for obtaining water is impractical.
3) Wells that have been left uncompleted.

What do unused wells look like?

Unused wells come in many different shapes and sizes. Signs that might help you locate an unused well are:

* A pipe sticking out of the ground or the floor of your basement.
* A depression in the ground that appears to be draining the surrounding area.
* A ring of concrete, brick or stone that could be remnants of a dug well.
* Old sheds, windmills, or structures associated with a well.
* A pipe out in the yard which has been capped.

Examples of identified unused wells

Why Should Unused Wells Be Properly Plugged?

Unused wells are a direct conduit to our ground water resources. Contaminated surface runoff has the ability to go through these gateways to ground water by completely bypassing the natural filtration capacity of the soil.